

Subtracting Mixed Numbers

Just as you can subtract whole numbers and fractions, you can subtract mixed numbers. If the fraction to be subtracted is larger than the other fraction, you must rename part of the whole number as a fraction. Remember that 1 equals a fraction with the same number as the numerator and denominator.

Example 1

Rename $4\frac{2}{3}$ as $3\frac{\square}{\square}$.

Rename 4 as $3 + \frac{3}{3}$ and add to $\frac{2}{3}$: $3 + \frac{3}{3} + \frac{2}{3} = 3\frac{5}{3}$.

So, $4\frac{2}{3} = 3\frac{5}{3}$.

Try It Rename each number.

a. $2\frac{4}{5} = 1\frac{\square}{\square}$ _____

b. $10\frac{1}{2} = 9\frac{\square}{\square}$ _____

c. $16\frac{5}{8} = 15\frac{\square}{\square}$ _____

Example 2

Subtract $8\frac{1}{3} - 2\frac{5}{6}$. Write the answer as a whole or mixed number in lowest terms.

Rewrite fractions using LCD.
LCD is 6.

Rename $8\frac{1}{3}$ as
 $7 + \frac{6}{6} + \frac{2}{6}$, or $7\frac{8}{6}$.

Subtract the
whole numbers.

Subtract the
fractions.

$8\frac{1}{3} \rightarrow 8\frac{2}{6}$	\rightarrow	$7\frac{8}{6}$	\rightarrow	$7\frac{8}{6}$	\rightarrow	$7\frac{8}{6}$
$-2\frac{5}{6} \rightarrow -2\frac{5}{6}$	\rightarrow	$-2\frac{5}{6}$	\rightarrow	$-2\frac{5}{6}$	\rightarrow	$-2\frac{5}{6}$
				<u>5</u>		<u>5\frac{3}{6}</u>

Write the difference as a mixed number in lowest terms. $5\frac{3}{6} = 5\frac{1}{2}$

So, $8\frac{1}{3} - 2\frac{5}{6} = 5\frac{1}{2}$.

Try It Subtract. Write each difference as a whole or mixed number in lowest terms.

d. $7\frac{1}{5} - 2\frac{3}{5}$

Rename $7\frac{1}{5}$. $7\frac{1}{5} = 6\frac{\square}{\square}$. _____

Subtract the whole numbers. _____

Subtract the fractions. _____

Write the difference. _____

e. $14\frac{3}{5} - 7\frac{3}{10}$ _____

f. $6\frac{1}{4} - 2\frac{3}{4}$ _____

g. $9\frac{2}{3} - 5\frac{3}{4}$ _____

h. $10 - 3\frac{5}{6}$ _____

i. $5\frac{7}{8} - 2\frac{1}{4}$ _____

j. $8\frac{1}{5} - 7\frac{3}{4}$ _____

k. $10\frac{5}{9} - 6\frac{2}{3}$ _____

l. $12 - 5\frac{3}{5}$ _____

m. $15\frac{2}{3} - 15\frac{1}{6}$ _____

n. $20\frac{5}{8} - \frac{3}{4}$ _____